

Planning for Alternative Energy at Wallops Flight Facility

“Considering Mission and Environment”

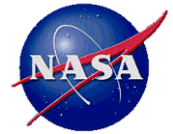
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*Prepared for Energy & Environment Conference
Langley Research Center
September 2008*

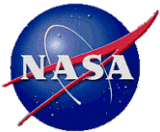
WALLOPS FLIGHT FACILITY





Why pursue renewables?

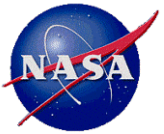
- Federal Energy Requirements
- Stabilize Utility Budget
- Research and Development to better understand:
 - * turbine performance in Mid-Atlantic
 - * true avian and bat impacts



Background for Wallops Wind Project

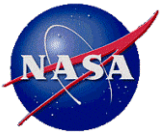
- JMU feasibility study (enter dates)
 - wind resource assessment
 - recommended turbine size
 - calculated project economics
 - evaluated interconnection
- ...and identified

****potential mission and environmental issues****



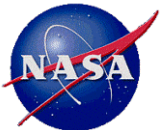
Considering the Mission

- Research Airfield
- Science Radar
- NAVY Radar
- Launch Range (Tracking) Radar



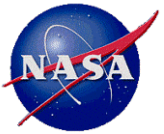
Siting within Mission Constraints

- EA drove micrositing exercise
- Primarily focused on radar impacts
- Team led by Center Director
- Team made up of NAVY Commander, Frequency Manager, and various radar stakeholders
- Supported by DOE/Idaho National Labs
- Utilized GIS to map radar sectors and to rule out areas of potential interference

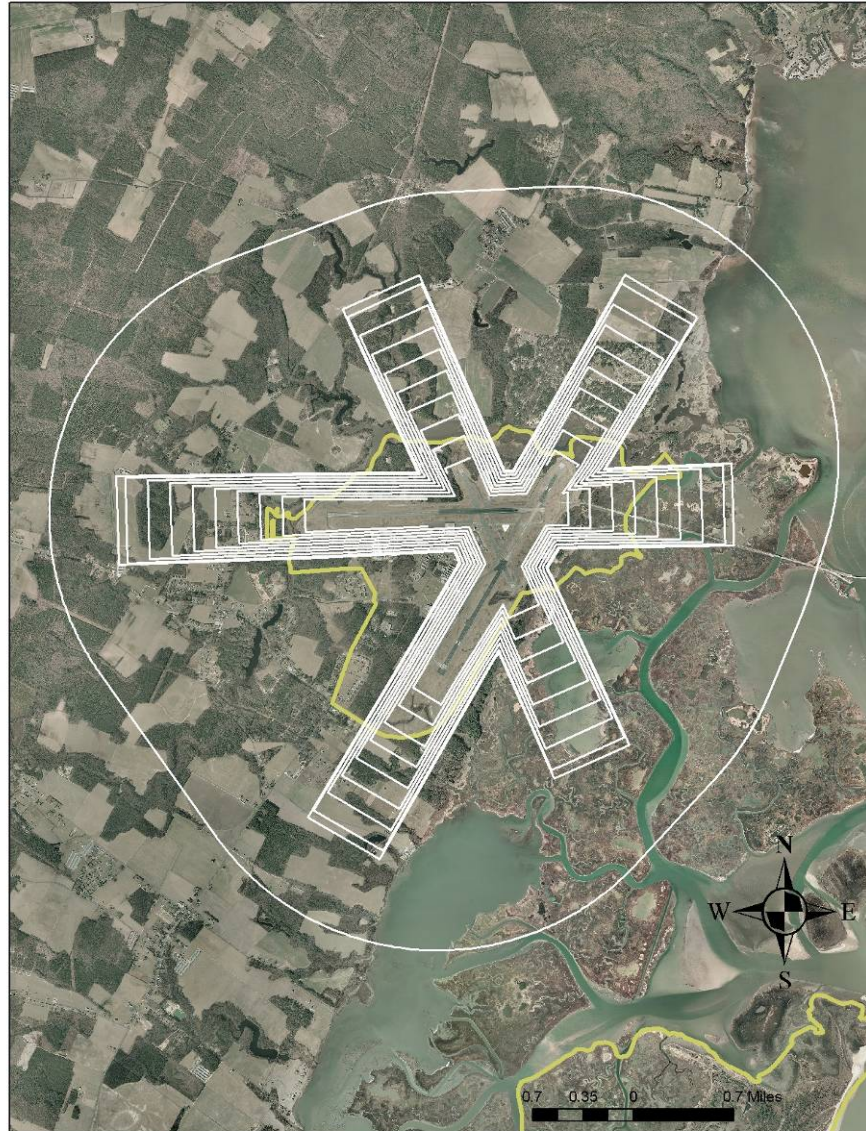


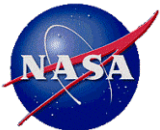
An Illustration of the Siting Exercise



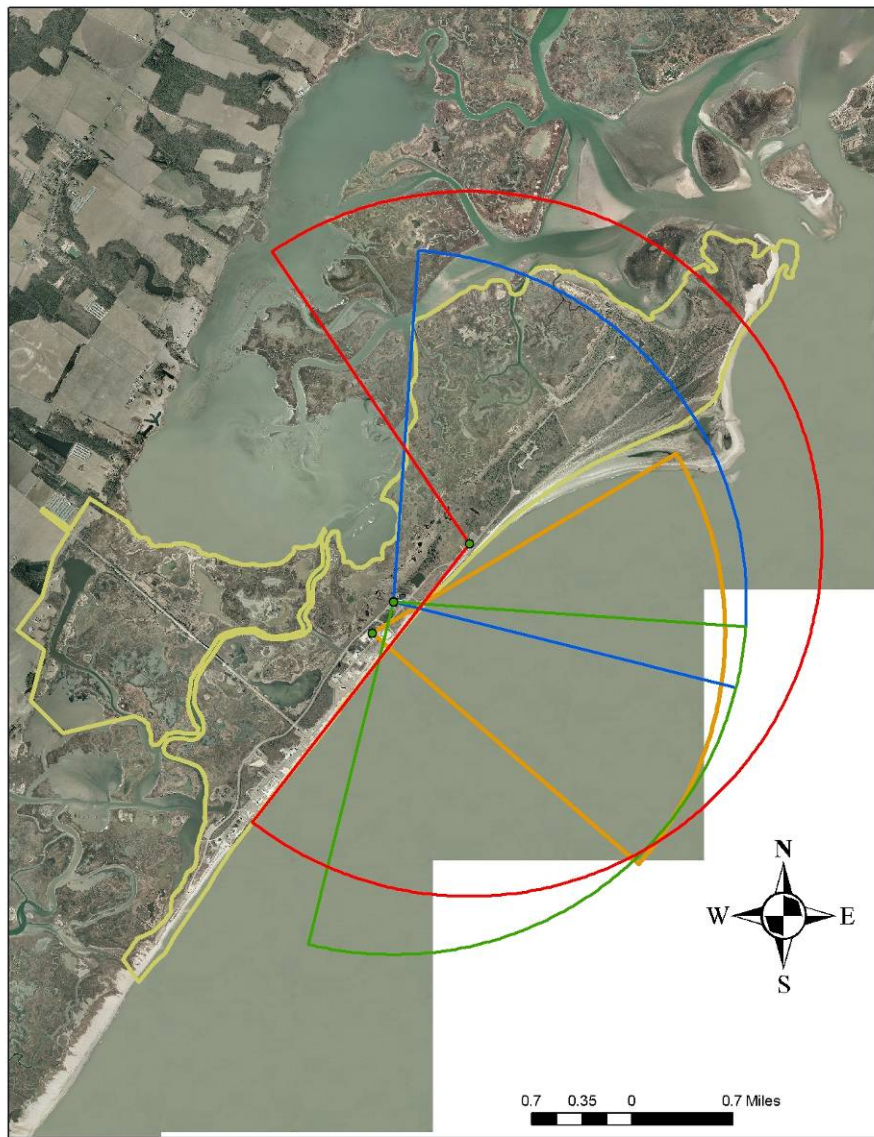


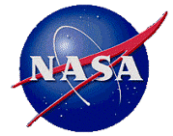
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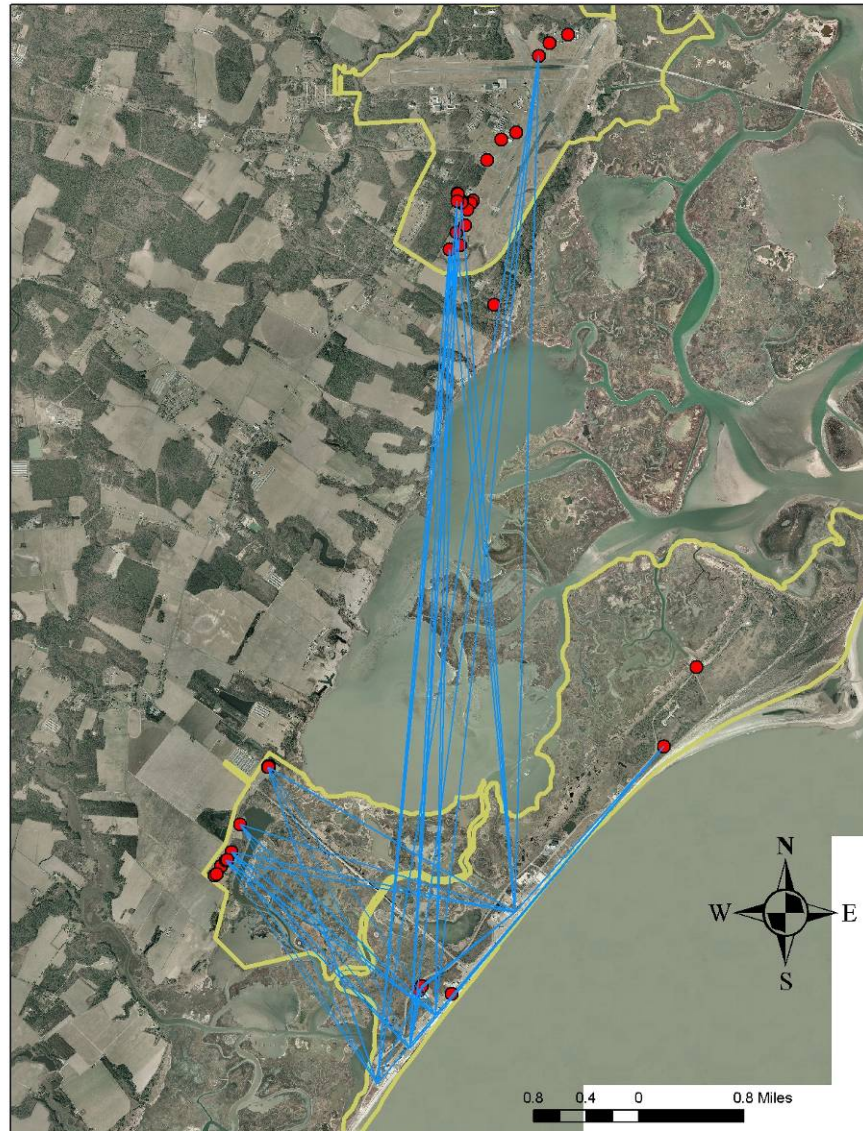


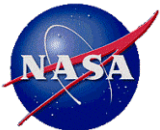
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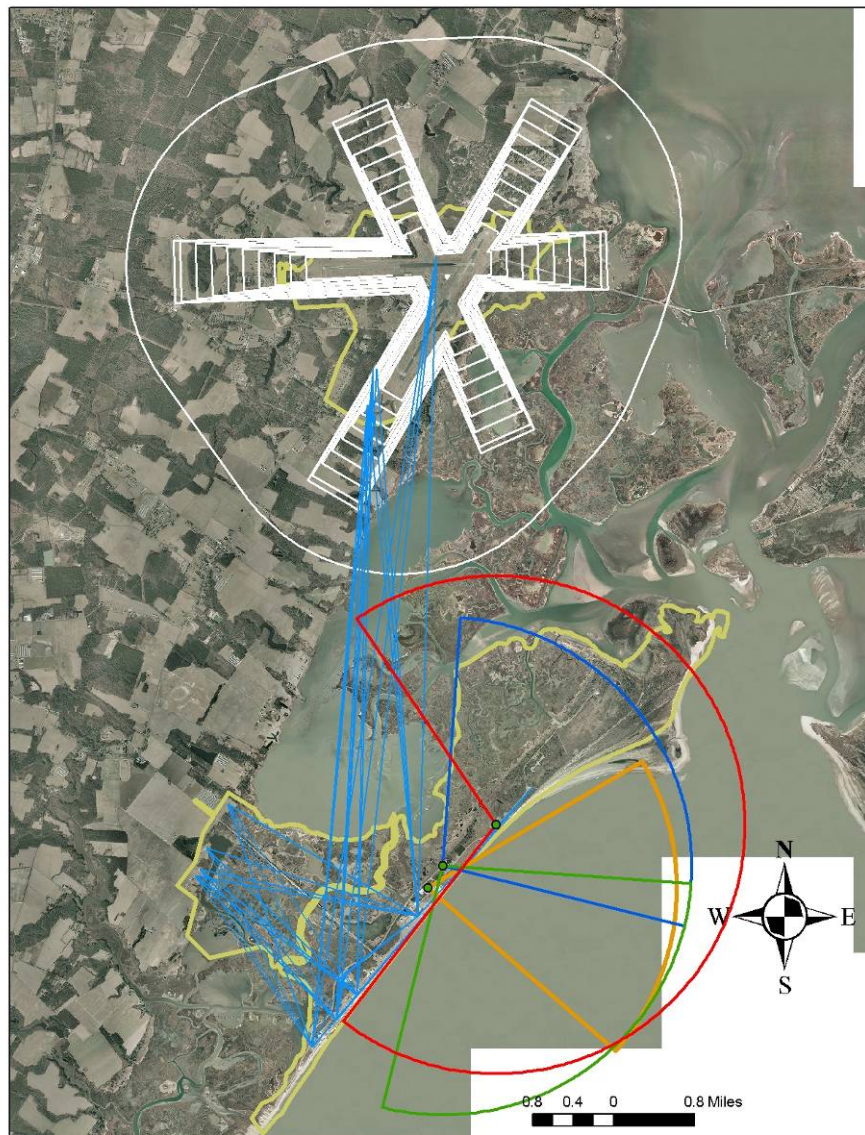


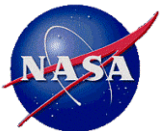
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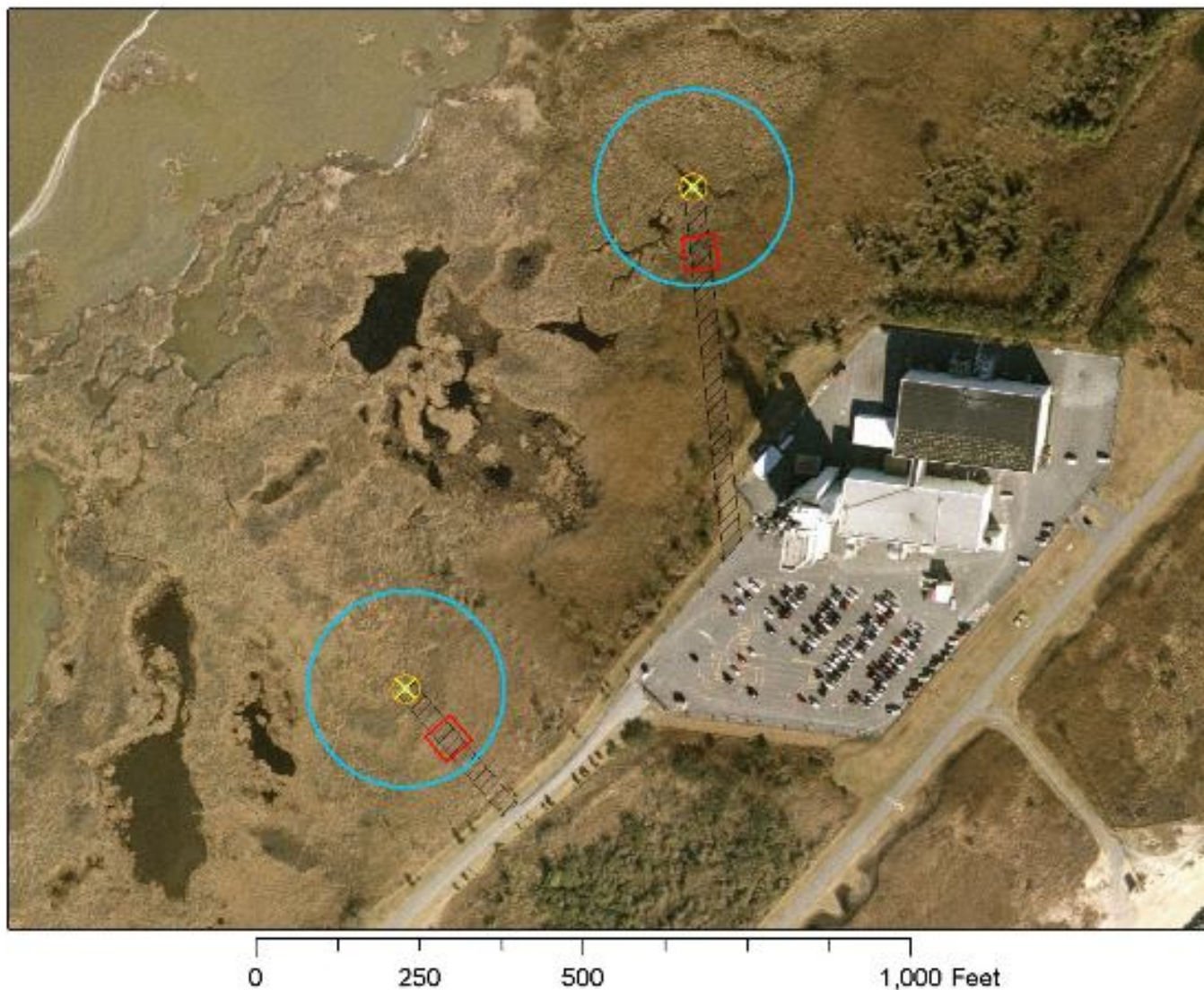


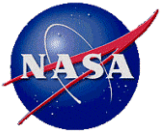
An Illustration of the Siting Exercise





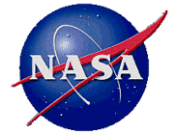
An Illustration of the Siting Exercise





From Mission to Environment

- Mission concerns addressed
- Final turbine location(s) selected
- Commence site-specific Environmental Assessment



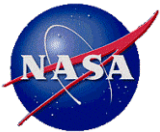
Considering the Environment

ENVIRONMENTAL ASSESSMENT

- Process required to meet NASA's NEPA obligations
- Objective analysis of proposed action and alternatives
 - Proposed Action – Two (2) 1.5 MW turbines
 - Alternative One – Single 1.5 MW turbine and single turbine equivalent (~7 acres) solar panels
 - Alternative Two – Solar panels only; two turbine equivalent (~14 acres)
 - Clearly presents findings to public before action is taken
- Ongoing contract with TetraTech, URS Corporation, and Curry & Kerlinger, LLC
 - Site verification and feasibility study
 - Ground-based avian and bat study

The most controversial





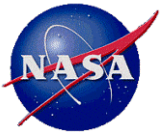
Considering the Environment

ENVIRONMENTAL ASSESSMENT (cont.)

- Section 7 Endangered Species Act
- Wetlands Delineation and Mitigation Plan
- Photomontages for Community Viewshed
- Historical Viewshed Analysis
- Development of Final Alternative Energy Project Environmental Assessment (EA)**
 - Expected Completion Dec 2009

Million Dollar Question:

Will there be any Biologically Significant Impacts from the Project?



Lessons Learned (So Far)

- Involve Project Stakeholders Early!
 - Environmental Groups
 - General Public
- Procurement is Challenging!
 - Funding
 - Long Lead-Time Items
- Limited Federal Wind Installation
 - Just Over 10 MW installed
 - 4 Projects in CONUS
 - DOE NREL a Great Resource!
- Keep Project in Context!!

Thank You!

Questions?